Pattern of Breast Lesions in A Breast Clinic in Kirkuk, Iraq

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Abstract:

Background: The pathology profile of breast lesions is still not well defined in Kirkuk province and the rest of IRAQ. Breast diseases constitute a heterogeneous group, in which benign neoplasm is the leading lesion. Knowledge of the pattern of such lesions can provide better understanding of its causes natural history and preventive strategies.

Objective: The aim of this study is to evaluate the pattern of breast lesions in patients who consulted the breast clinic in Kirkuk, during a nine years period (Jan 1994 – Jan 2003) in order to assist initiation of further studies to highlight the natural history of breast diseases mainly breast cancer.

Methods & patients: The study consists of (2000) patients, with breast problems who consulted the breast clinic in Kirkuk. The outline of the breast lesions are tabulated and classified as inflammatory, benign and malignant, in addition to other lesions like congenital, functional, and developmental ones.

Results: Inflammatory lesions are the commonest in this study (30.7%) followed by benign neoplasm (22.25%), malignant (6.9%) and other benign conditions (40.15%).

Conclusion: The rate for breast lesions varied in different studies where benign neoplasm constituted the most common one followed by malignant lesions, inflammatory and other lesions. In this study inflammatory disease is the commonest breast lesion followed by benign and then by malignant neoplasm.

Key words: Breast lesion, breast clinic, Kirkuk

Introduction:

Background

Kirkuk Province is located in Northern part of IRAQ and its area is 9679 Km [2]. The pathology profile of breast lesions is still not well defined in Kirkuk province. In fact the reports related to breast disease in IRAQ focuses mainly on malignant mammary neoplasm. The pattern of breast lesions in developed and developing countries has been emphasized by many authors. Breast diseases constitute a heterogeneous group, including inflammatory, neoplasm, congenital, functional, developmental and others [1, 2, 3]. However the results of their studies are very similar, in which it revealed benign neoplasm as the leading lesions followed by malignant, inflammatory and others. International comparisons of disease rates by area and time of diagnosis can provide important clues to the underlying causes of diseases and the effects of natural or planned interventions, and serve as indicators of the scope for preventive strategies. There is at least a 10-fold variation in breast cancer incidence rates worldwide [4], largely as a consequence of a range of socio-economically correlated differences in the population prevalence of several reproductive, hormonal and nutritional factors. In some high-resource countries, mammographic screening has considerably affected breast cancer diagnosis, registration and mortality.

Materials &Patients

This retrospective study was carried out to provide the pattern of breast lesions as recorded in the Breast Clinic in Kirkuk. It involved 2000 patients who consulted the clinic, during a period of nine years (Jan 94 - Jan 2003).

All the cases in this study were managed properly using classical measures for diagnosis of breast diseases including history, physical examination, sonography, mammography, fine needle aspiration cytology (FNAC), and open biopsy. The breast lesions were classified into four major groups, namely inflammatory, benign, and malignant neoplasm and other benign conditions. Each major group was subdivided into subgroups and evaluated accordingly.

Results

During the 9 years study period, 2000 patients were registered. Six hundred and fourteen patients (30.7%) had inflammatory diseases, 445 patients (22.25%) had benign neoplasm, and 138 patients (6.9%) had malignant neoplasm. Other benign conditions of the breast constituted the remaining cases (Table 1).

Table 1: Breast Lesions in 2000 Patients in Breast Clinic in Kirkuk

Breast lesions	No.	%
Inflammatory diseases	614	30.70
Benign neoplasm	445	22.25
Malignant neoplasm	138	6.90
Other benign lesions-		
Fibrocystic diseases	122	6.10
Fibroadenosis	106	5.30
Galactocele	36	1.80
Ductectasia	31	1.55
Solitary breast cyst	20	1.00
Hydatid cyst	5	0.25
Injuries	5	0.25
Fat necrosis	10	0.50
Breast hypertrophy	4	0.20
Breast atrophy	4	0.20
Congenital nipple retraction	2	0.10
Mondor's disease	1	0.05
Early Disc enlargement in girls	37	1.85
Functional lesions and Mastalgia	395	19.75
Male breast disorders & gynaecomastia	25	1.25
Total	2000	100

As evident in table 1 the inflammatory diseases constituted the majority of breast lesions. Out of all the inflammatory breast lesions, 400 patients (65.2%) had acute inflammation, 136 patients (22.2%) had breast abscesses, 25 patients (4.1%) had non-specific chronic inflammation, 20 patients (3.3%) had nipple crack and eczema, and 18 patients (2.9%) had boils. Tuberculous mastitis was found in 10 patients (1.6%) and mammary fistulae due to inflammation was found in 5 patients (0.8%) (Table 2).

Table 2: Inflammatory breast lesions

Lesions	No.	%
Acute inflammation	400	65.15
Breast abscess	136	22.15
Non- specific chronic inflammation	25	4.07
Crack & eczema	20	3.26
Boil	18	2.93
Tuberculous mastitis	10	1.63
Mammary fistula	5	0.81
Total	614	100

The incidence of benign neoplasm comes second to inflammatory diseases. Out of all the benign breast neoplasm, 354 patients (79.6%) had fibroadenoma, 33 patients (7.4%) had lipoma, 31 patients (7.0%) had duct papilloma, 19 patients (4.3%) had lactating adenoma, 5 patients (1.1%) had tubular adenoma and 3 patients (0.7%) had benign phillodes tumor (Table 3). In this study 138 patients had malignant neoplasm. Out of all the malignant breast neoplasm 103 patients (74.6%) had infiltrating intraductal carcinoma, 20 patients (14.5%) had infiltrating lobular carcinoma, 5 patients (3.6%) had medullary carcinoma, 5 patients (3.6%) had Paget's disease, 2 patients (1.5%) had carcinoma in situ, 2 patients (1.5%) had colloid carcinoma, and 1 patient (0.7%) had intraductal carcinoma (Table 4).

Table 3: Benign breast neoplasm

Lesion	No.	%
Fibroadenoma	354	79.55
Lipoma	33	7.42
Duct papilloma	31	6.97
Lactating adenoma	19	4.27
Tubular adenoma	5	1.12
Benign phylloides tumor	3	0.67
Total	445	100

Table 4: Malignant breast lesions

Lesions	No.	%
Infiltrating intraductal carcinoma	103	74.64
Infiltrating lobular carcinoma	20	14.49
Medullary carcinoma	5	3.62
Paget's disease	5	3.62
Carcinoma in situ	2	1.45
Colloid carcinoma	2	1.45
Intraductal carcinoma	1	0.72
Total	138	100

In the other benign breast lesions 122 patients (6%) had fibrocystic disease, 106 patients (5.3%) had fibroadenosis, 36 patients (1.8%) had galactocele, 31 patients (1.6%) had ductectasia, 20 patients (1%) had solitary breast cyst, 5 patients (0.3%) had hydatid cyst. In 5 patients (0.3%) different breast injuries were inflicted due to accidents such as bullet injury, stab to the breast, and human bite as in 2 of cases. Fat necrosis with no history of trauma was found in 10 patients (0.5%), 2 of which were due to kerosene injection directly to breast by the patient herself. Four patients (0.2%) had bilateral hypertrophy of breast, 4 patients (0.2%) had breast atrophy, and 1 patient (0.1%) had Mondor's disease. Early breast disc enlargement

occurred in 37 young girls (1.9%). Their ages were between 6 and 10 years. They presented with unilateral enlargement of breast disc with normal breast tissue. Functional breast lesions and mastalgia were seen in 395 patients (19.8%). The commonest type of mastalgia in these cases was bilateral cyclical mastalgia. Male breast disorders and gynaecomastia were found in 25 patients **(**1.3%). Male malignancy was not recorded in this study (Table 1).

Discussion:

The rate for breast lesions varied in different studies, in which benign neoplasm constitutes the most common breast disease followed by malignant one [5, 6, 7]. Where as in this study inflammatory disease is the leading one among all the cases (30.7%) followed by benign neoplasm (22.3%) and then malignancy (6.9%).

The explanation of this high rate of inflammatory diseases is not clear. It can be speculated that many parts of Kirkuk are rural areas and that make it difficult for females in the reproductive age group who usually get married at early age, to be instructed and successfully implement all the information related to hygienic aspects of lactation and care for breast offered by doctors and nursing staff of health centers. In addition, the population of this region keeps up very well the good tradition of breast feeding for long periods. That is why it is not surprising to have so many cases of inflammatory breast diseases in this study.

In this study fibroadenoma constitute (17.7%) of total breast lesions, which is very similar to the results of other studies done in Arab region [7], but it is much higher than in England (7.7%) and nearly equal to USA (18%) and less than African American people (35%) [8].

Malignant neoplasm in this study constituted (6.9%) of the cases. This result is similar to other studies done in Arab region like in Jordan [8] which suggest that the low incidence of malignancy is due to different pyramidal age distribution in these countries as well as different social and dietary habits.

Fibrocystic lesions constitutes (6.1%) of total cases, which is lower than in developed countries as in UK (37%) and USA (39%). Cyclical mastalgia is a dominant problem in our patients as evident in this study which is a similar one as in most other abroad breast clinics [9, 10]. Non-cyclical mastalgia and muscular pain are not involved in this study.

Conclusion:

Breast inflammatory disease is the commonest breast lesion in this study followed by benign and malignant neoplasm and then the other breast lesions. Fibroadenoma and infiltrating ductal carcinoma are the leading conditions regarding benign and malignant neoplasm respectively.

Hopefully this study will assist to appreciate the prototypes breast lesions in IRAQ and will initiate further studies to shed more light on the natural history of breast diseases mainly breast cancer which is the most common threatening cancer in women everywhere including IRAQ.

References:

1-Mannello F. Tonti GA. Benign breast diseases: classification, diagnosis, and management. [Comment]. [Comment. Letter. Research Support, Non-U.S. Gov't] Oncologist. 11(10):1132-4; author reply 1134, 2006 Nov-Dec.

2-Khan S. Kapoor AK Khan Prospective study of pattern of breast diseases of Nepalgun Medical college (NGMC) Nepal (Journal article) Kathamendo university medical journal 1(2) 95-100), 2003 April-Jun.

3-Guray M. Shain AA Benign breast diseases (classification, diagnosis and management [Review] [journal Article Review] Oncologist 11(5): 435-49, 2006 May.

4-Bray F. McCarron P. Parkin DM. The changing global patterns of female breast cancer incidence and mortality. [Review] [85 refs] [Journal Article. Research Support, Non-U.S. Gov't. Review] Breast Cancer Research. 6(6):229-39, 2004.

5-Mansoor I. Profile of female breast lesions in Saudi Arabia. [Journal Article] JPMA - Journal of the Pakistan Medical Association. 51(7):243-7, 2001 Jul.

6-Jamal AA. Pattern of breast diseases in a teaching hospital in Jeddah, Saudi Arabia. [Journal Article] Saudi Medical Journal. 22(2):110-3, 2001 Feb.

7-Yagan et al Epidemiology of breast cancer in Jordan, Saudi Medical Journal (1999) Vol 20 (10).

8-Amr SS Breast diseases in Jordanian Females, Euro J surgoncol 1985, 11(3) 257-262.

9-Murillo Ortiz B. Botello Hernandez D. Ramirez Mateos C. Reynaga Garcia FJ. [Benign breast diseases: clinical, radiological and pathological correlation.]. [Spanish] [English Abstract. Journal Article] Ginecologia y Obstetricia de Mexico. 70:613-8, 2002 Dec.

10-Gumm R. Cunnick GH. Mokbel K. Evidence for the management of mastalgia. [Review] [30 refs] [Journal Article. Review] Current Medical Research & Opinion. 20(5):681-4, 2004 May.

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